

PROTECTIVE CLOTHING



OCCUPATIONAL DERMATITIS

◆ *What is it?*

- Inflammation of the skin
- Results from exposure to irritants in the work environment
- May be slight reddening of the skin with mild itching
- Rash
- Small eruptions with intense itching

◆ *What causes it?*

CAUSES OF SKIN PROBLEMS

- **CHEMICAL**

- Most frequent cause of dermatitis
- Acts as primary skin irritant
- Differs in two respects:
 - Reaction Time
 - Mode of Action
 - Mists, vapors, diluted or full strength

- **MECHANICAL**

- Friction
- Pressure
- Results in abrasions, wounds, bruises
- Introduces foreign bodies into skin
 - Examples: Falling on Non-Skid, Air Nozzle

- **BIOLOGICAL AGENTS**

- Bacteria, viruses, fungi, and insects
- Complicates dermatitis
 - Examples: Bee stings, Athlete's foot
- Not all skin reacts in the same way or to the same degree to causes

FACTORS INFLUENCING SKIN REACTION

◆ TYPE OF SKIN

- ◆ Pigmentation
- ◆ Dryness
- ◆ Hairiness

◆ GENDER

- ◆ Women have more sensitive, less oily skin than men

◆ AGE

- ◆ Affects younger personnel more

FACTORS INFLUENCING SKIN REACTION

- ◆ TEMPERATURE EXTREMES
 - ◆ More prevalent in warm weather
 - ◆ Risk of direct contact is greater due to less clothing worn
 - ◆ Excessive perspiration - skin is more vulnerable
 - ◆ Low winter temps cause dry, chapped skin causing cracks

FACTORS INFLUENCING SKIN REACTION

- ◆ EXCESSIVE OILINESS/DRYNESS
 - ◆ Naturally oil skins are less likely to incur dermatitis when working with fat solvents
 - ◆ More susceptible to substances that remove oil
 - ◆ Dry skin cracks easily, especially around alkalis and solvents
 - ◆ Cracked skin makes skin subject to infections
- ◆ LACK OF CLEANLINESS
- ◆ ALLERGIES



***EASIER TO
PREVENT THAN
TO CURE***



PREVENTION

- Chain of command support
- Hazardous awareness training
- Personal cleanliness
- Eliminate contact
- Identify hazards
- Good housekeeping
- Instruction
- Barrier creams

SELECTING PROTECTIVE CLOTHING/EQUIPMENT

- TURN TO

***APPENDIX H,
NSTM 074 VOL. 3***

NSTM 074, VOL 3

- Person working with irritants, caustics, or toxic materials shall wear
 - Protective Coveralls
 - Gloves
 - Boots

CHAIN OF COMMAND ENSURES PERSONNEL ARE PROPERLY PROTECTED

- ***COVERALLS, GLOVES, AND
BOOTS MAY NOT BE ENOUGH!!!!***

REMEMBER -

SIGHT

HEARING

PHYSICAL PROTECTION

EYE AND FACE PROTECTION



- Face shields
 - Can accommodate respiratory protection devices
- Safety Goggles/Glasses
 - Chemical
 - Plastic Perforated
 - Welding/Chipping
 - Tinted
 - Wire



HAND PROTECTION



HAND PROTECTION

- Natural-Laytex
 - Resistant against acids, caustics, abrasion from sand blasting, grinding
 - General Purpose Use
- Butyl Rubber
 - Resistant to Toxic chemicals, gases, water vapor, oxidation, and ozone attack
- Neoprene Rubber
 - Oils, greases, petroleum, tear resistant

HAND PROTECTION

- Milled Nitrile
 - Use where sense of touch is a must
 - Stand up to mechanical abuse
- Natural Rubber
 - Good pliability over large temperature range
 - Long term resistance to chemicals & acids
- Vinyl Coated
 - Chemical & abrasion resistant
 - Use for handling oils, acids, caustics, most solvents

HEAD PROTECTION

- Helmets/Hardhats protect crewmembers from:

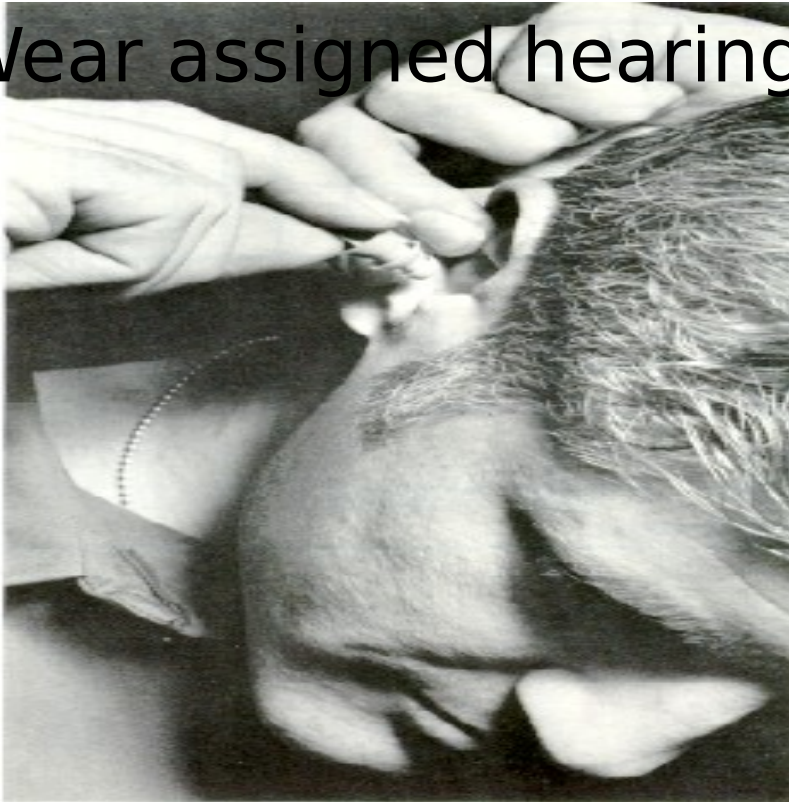
- Falling and flying debris
- Impact with low overheads



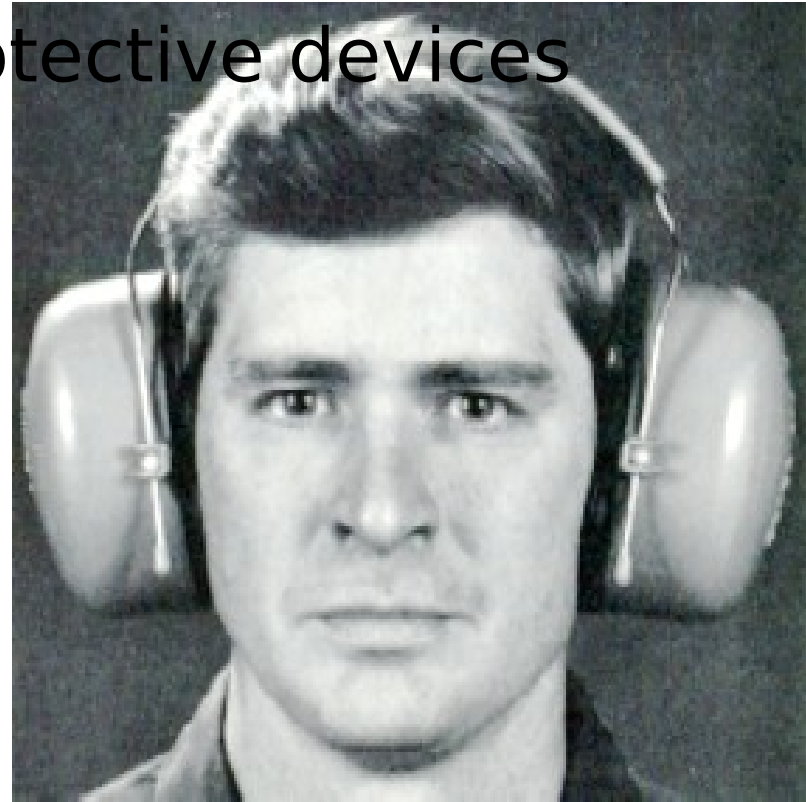
HEARING PROTECTION

All hands shall comply with hazardous noise labels

Wear assigned hearing protective devices



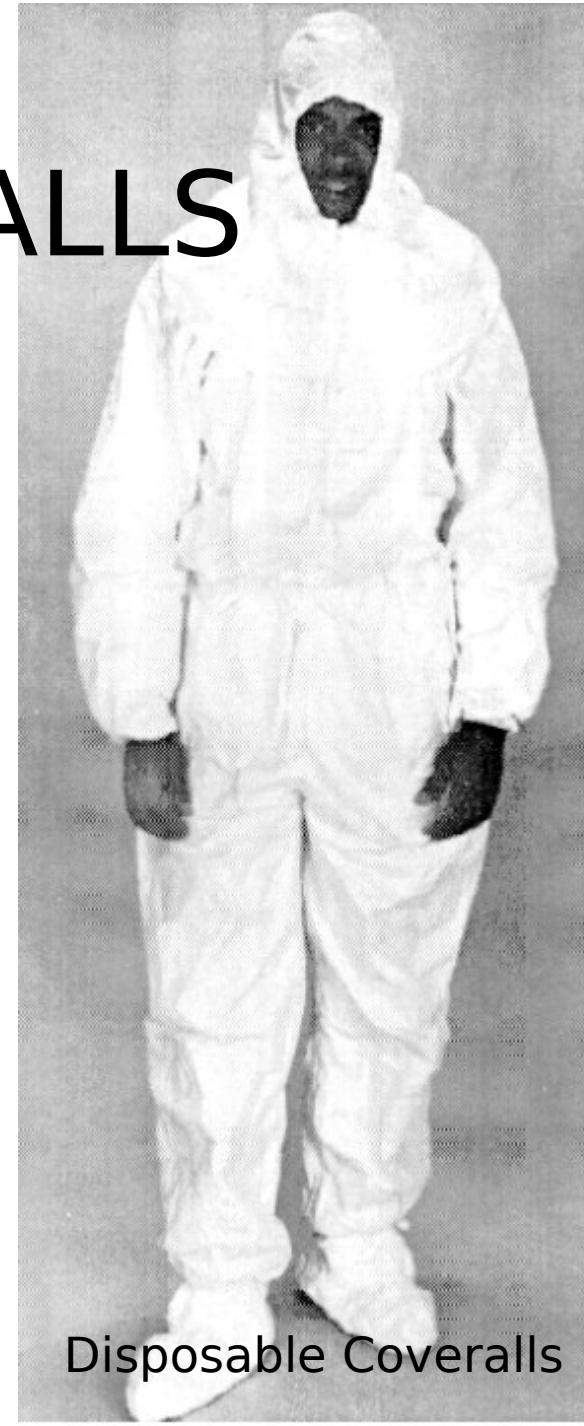
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Circumaural

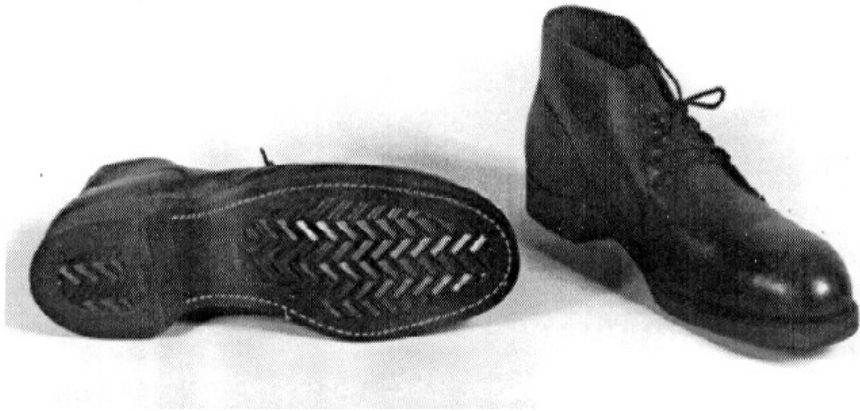
BODY PROTECTION/COVERALLS

- Should provide comfort of movement
- Selection and way it protects wearer vary from vendor to vendor



Disposable Coveralls

SAFETY SHOES AND BOOTS



Chukka
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- Water resistant leather
- Heels and soles have treads
 - Non-marking
 - Non-sparking
 - Water/Fuel resistant
- Steel toe

MISCELLANEOUS PROTECTION



- **Chemlites**
- **Flashlight**
- **Harness/lifelines**
- **Communications**
- **“PASS”**

THE END



QUESTION #1

- What factors influence the way that persons react to industrial irritants?

- *TYPE OF SKIN*
- *SEX OF THE PERSON*
- *AGE & EXPERIENCE*
- *TEMPERATURE EXTREMES*
- *EXCESSIVE OILINESS*
- *LACK OF CLEANLINESS*
- *ALLERGIES*

